REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

I. Claim Status

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Claims 1-3, 5, 7 and 10 are currently being amended. Support for the amendment can be found throughout the Specification, for example in the original claims and Paragraphs [0023]. No new matter is added.

After amending the claims as set forth above, claims 1-5 and 7-13 are now pending in this application.

II. Specification

In the specification, the title of the invention is amended as suggested. Support for the amendment can be found throughout the Specification. No new matter is added. Accordingly, the objection to specification is rendered moot.

III. Drawings

The drawings are objected to under 37 CFR § 1.83(a) for not identifying the "gas inlet" in claims. Independent claims 1, 5, 7 and 10 are amended to delete the term of "gas inlet," with no prejudice or disclaimer. Applicant respectfully submits that the drawing objection is now moot in view of the amendments made to the claims.

IV. Claim Objections

Claims 1-4 and 13 are objected to. Claims 1-4 and 13 are amended, without prejudice or disclaimer, for clarification. Accordingly, the claim objections are rendered moot.

V. Claim Rejections Under 35 U.S.C. § 112

Claim 2 is rejected under 35 U.S.C. § 112, second paragraph. Claims 2-3 are amended to recite that the vacuum pump of at least one stage is a single-stage vacuum pump or has multiple stages, respectively. Accordingly, the section 112 rejections are now moot.

VI. Claim Rejections Under 35 U.S.C. §§ 102 & 103

Claims 1-3, 10-11 and 13 are rejected under 35 U.S.C.§ 102(b) as being anticipated by Akutsu (JP 2002039061A). Claims 1 and 10 are rejected under 35 U.S.C.§ 103(a) as being unpatentable over Gebele (US 5,228,838). Claims 1 and 10 are rejected under 35 U.S.C.§ 103(a) as being unpatentable over Conrad (US 7,033,142). Claims 4, 9 and 12 are rejected under 35 U.S.C.§ 103(a) as being unpatentable over Akutsu, Conrad or Gebele in view of Maruyama (JP 09321 021), Puech (US 6,644,931) or Smith (US 5,925,167). Claims 7-8 are rejected under 35 U.S.C.§ 103(a) as being unpatentable over Conrad. Claim 5 is rejected under 35 U.S.C.§ 103(a) as being unpatentable over Smith. Applicant respectfully traverses the rejections for at least the following reasons.

Independent Claims 1, 5, 7 and 10 as amended recite that the compressor pressurizes an output side thereof to a pressure higher than the atmospheric pressure. Due to such claimed features, the last-stage vacuum pump, the third vacuum pump or the second vacuum pump is not required to increase the pressure of the sucked gas to the atmospheric pressure or more and therefore a back diffusion from the discharge port of the last-stage vacuum pump, the third vacuum pump or the second vacuum pump is suppressed (*see* Specification, Paragraph [0023]). Accordingly, such claimed features reduce the power consumption of the last-stage vacuum pump, the third vacuum pump or the second vacuum pump as compared with conventional apparatus (*see* Specification, Paragraph [0023]). For example, as shown in Figure 3, "a screw pump having the compressor is reduced in power consumption by approximately 50% as compared with a screw pump having no compressor connected" (*see* Specification, Paragraph [0052]). Furthermore, a gas recovery apparatus in general forcibly injects discharged gas into a

filter, for example a filter made of porous calcium ceramics. Therefore, it is also advantageous that a compressor pressurizes discharged gas at an output side thereof to a pressure higher than the atmospheric pressure.

In contrast, none of Akutsu, Gebele, Conrad and Smith disclose or suggest that the compressor pressurizes an output side thereof to a pressure higher than the atmospheric pressure, as recited in the independent claims.

Specifically, Akutsu discloses that the rough pumps 19, 20 and 21 are respectively connected to the vacuum pumps 7, 8 and 9. However, Akutsu fails to disclose or suggest that the rough pumps 19, 20 and 21 pressurize discharged gas at output sides to a pressure higher than the atmospheric pressure.

Gebele discloses that the forepumps 10 and 11 are respectively connected to the vacuum pumps 8 and 9. However, Gebele also fails to disclose or suggest that the forepumps 10 and 11 pressurize discharged gas at output sides to a pressure higher than the atmospheric pressure.

Conrad discloses that the forepump 9 is connected to the vacuum pumps 6 through the forepump 8. However, Conrad also fails to disclose or suggest that the forepump 9 pressurizes discharged gas at an output side to a pressure higher than the atmospheric pressure.

Smith discloses that the vacuum pump 27 in which an input side thereof is connected to the vacuum pumps 18-21 while an output side thereof is connected to the gas recovery unit 28. However, Smith also fails to disclose or suggest that the vacuum pump 27 pressurizes discharged gas at the output side to a pressure higher than the atmospheric pressure.

Therefore, Akutsu, Gebele, Conrad and Smith, either alone or in combination, fails to teach or suggest that the compressor or the gas recovery compressor pressurizes an output side thereof to a pressure higher than the atmospheric pressure.

Maruyama and Puech are cited for disclosing other features of the claims, but fail to cure the above-explained deficiencies of Akutsu, Gebele, Conrad and Smith.

The dependent claims are patentable for at least the same reasons as the respective base claim thereof.

For at least the above reasons, Applicants respectfully request withdrawal of the claim rejections.

VII. Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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By

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